

Notice of Allowability

Application No.

10/813,943

Examiner

Anthony J. Canning

Applicant(s)

NA ET AL.

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/13/06.
2. ☒ The allowed claim(s) is/are 1,3-7,9-13 and 15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED ACTION

Acknowledgement of Amendment

1. The amendment to the instant application was entered on 13 March 2006.

Election/Restrictions

2. This application is in condition for allowance except for the presence of claim 14 directed to the method of manufacturing an emitter composition of a field emission cell non-elected without traverse. Accordingly, claim 14 has been cancelled.

Examiner's Amendment

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
4. Authorization for this examiner's amendment was given in a telephone interview with David Allred on 18 May 2006.

The application has been amended as follows:

5. Cancel claim 8.
6. Cancel claim 14.

Allowable Subject Matter

7. Claims 1, 3-7, 9-13 and 15 are allowed.

The following is an examiner's statement of reasons for allowance:

8. As to claim 1, the prior art of record fails to teach or reasonably suggest the combination of limitations set forth in claim 1, specifically an emitter paste composition used in a field emission cell including 2 wt% to 20 wt% carbon nanotubes, a binder, glass frit, a dispersing agent, an organic solvent and 0.1 wt% to 20 wt% diamond, based on the weight thereof.

9. As to claims 3-7, 9-13 and 15, claims 3-7, 9-13 and 15 are allowable for the reasons given for claim 1, and for the dependency of claims 3-7, 9-13 and 15 from claim 1.

10. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Applicant's Remarks

11. The examiner acknowledges the amendments to claims 1, 3-13 and 15, the cancellation of claim 2 and the withdrawal of claim 14.

12. The examiner acknowledges that Amey et al. (U.S. 6,409,567) nor Chuang et al. (U.S. 6,359,383) disclose an emitter paste for a field emission cell including 2 wt% to 20 wt% carbon nanotubes, a binder, glass frit, a dispersing agent, an organic solvent and 0.1 wt% to 20 wt% diamond, based on the weight thereof.

Pertinent Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Song et al. (U.S. 6,307,323 B1) is prior art in the field of field emission cells using an emitter material including diamond and carbon nanotubes.

Choi et al. (U.S. 2001/0006232 A1) is prior art in the field of field emission cells using an emitter material including diamond and carbon nanotubes (paragraph 0013).

Dimitrijevic et al. (U.S. 20010024078 A1 and U.S. 2003/0132393 A1) are prior art in the field of field emission cells using an emitter material including diamond coated carbon nanotubes.

Sasaki et al. (U.S. 2004/0164665 A1) is prior art in the field of field emission cells using an emitter material including diamond and carbon nanotubes (paragraph 0057).

Contact Information

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Canning whose telephone number is (571)-272-2486. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh D. Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Anthony Canning
18 May 2006



NIMESHKUMAR D. PATEL
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800